

**Elementary Statistics**  
**Group B**

**Sheet 2**

- 1- Construct a histogram , a frequency curve, and a frequency polygon of the following table

<b>Class interval</b>	<b>frequency</b>
50-	13
60-	27
70-	43
80-	31
90-100	9

- 2- From the following table draw the histogram, and polygon and calculate the relative frequency

<b>classes</b>	<b>Frequency</b>
20-	10
40-	15
60-	9
80-	20
100- 120	22

- 3- From the following table draw the histogram and frequency polygon

<b>Class interval</b>	<b>frequency</b>
10-20	6
20-30	10
30-40	18
40-70	36

- 4- A set of 200 numerical values are distributed according to the following relative frequency table

<b>interval</b>	<b>Relative frequency</b>
0-	.075
5-	.180
10-	.410
15-	.300
20-25	.035

Compute the number of data values falling in each interval and sketch a frequency histogram for the data.

- 5- According to the air transport association of America , Delta airlines led all U.S carriers in the number of passengers flow in a recent year . the top 5 airlines were Delta, united, American , US Airways, and Southwest .the number of passengers flown (in thousands) by each of these airlines follows:

<b>Airline</b>	<b>passengers</b>
Delta	103,133
United	84,203
American	81,083
US Airways	58,659
Southwest	55,946

Construct a pie chart to depict this information.

- 6- From the following data draw the suitable graph

<b>label</b>	<b>value</b>
A	55
B	121
C	83
D	46

- 7- A random sample of visits to a certain park was selected during the last week of January. The age, activities, gender an duration of visit was recorded for each person. The observational unit was the visit itself by a certain person. The total number of such visits was 165. of these 15 were selected for the sample. The data from the sample was as follows:

age	activities	Gender (1=male,2=female)	Duration of visit (hr)
13	Walk	1	3
55	Ski	2	2
35	Ski	1	2
38	Ice fish	1	4
35	Walk	2	1
55	Walk	2	2
18	Sled	2	1
19	Sled	1	1
16	Walk	1	2
20	Ice fish	1	3
17	Walk	2	1
25	Walk	1	1
58	Camp,ski	1	22
51	Walk	2	1
35	Ski	2	1

- How many variables are there in the study?
- Which variables are qualitative and which are quantitative?
- Construct a histogram with 5 intervals for the variable age.
- Construct a pie chart for the variable activities.
- Construct a bar chart for the variable gender.

- 8- The following table shows the results of a study in which random samples of the members of five large unions were asked whether they are for or against a certain political candidate:

	Union1	Union2	Union3	Union4	Union5
For	74	81	69	75	91
against	26	19	31	25	9

- What is the percentage of those who are against the candidate in the sample.
  - Among the members of union1 what is the percentage of those who are against the candidate?
  - Among the members who are for the candidate what is the percentage of members in union 2?
  - What is the percentage of members in union3 and against this candidate?
- 9- . Consider the following table, formed by cross-classifying age group and brand of cola consumed for 1875 respondents.

COLA/AGE	UNDER AGE 15	AGES 15-25	AGES 25-35	TOTAL
Cola 1	150	100	200	450
Cola 2	300	125	200	625
Cola 3	300	200	300	800
Total	750	425	700	1,875

- What is the percentage of respondents consuming Cola 3?
- What is the percentage of respondents under age 15?
- What is the percentage of respondents whose ages are between 15 and 25 and are consuming Cola 2?
- Among those who prefer cola2 what is the percentage of those who are under 15 years old?
- Among those who are 15 years old or more what is the percentage of those who prefer cola1?